

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. APP. NO. 10/043,095

REMARKS

Summary of the Office Action

Claims 1-10 are pending in the application.

Applicant thanks the Examiner for allowing claims 3-6.

Claims 1, 2, and 10 are rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the enablement requirement.

Claim 7 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

Claim 8 is rejected under 35 U.S.C. § 102(b) as being anticipated by Sunwoo et al (U.S. Patent No. 6,314,129).

Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form to include all of the limitations of the base claim.

The above rejections are respectfully traversed.

Finally, the Examiner has objected to the specification because the Abstract exceeds 150 words. The Abstract is amended to reduce its length.

Claim Rejections Under 35 U.S.C. § 112, First Paragraph

In rejecting claims 1, 2 and 10 under 35 U.S.C. § 112, first paragraph, the Examiner alleges that in claim 1, line 3 and claim 2, line 5, the recitation of “differential filters having a differential property transfer function” and in claim 10, line 3, the recitation “differential filtering” are not supported in the specification.

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AMENDMENTS TO THE DRAWINGS

Attachment: Annotated Sheet(s)
Replacement Sheet(s)
New Sheet(s): Three (3)

Figs. 7-11 are added. Applicants will file formal drawings for the Examiner's approval in the near future. No new matter is added.

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In more detail, the Examiner states that the specification does not show the input and the complementary input connected to the differential filter and how the differential filters function in detail. The Examiner further states that the specification only discloses a real signal or an imaginary signal going to a differential filter, and the specification does not merely suggest or mention about the complementary input.

Applicant notes, however, that the literal language of claims 1, 2 and 10 does not require that the differential filters have two inputs. Claims 1 and 2 clearly recite first and second differential filters for respectively receiving and filtering a real number element and an imaginary number element of an input signal, and Figure 3 clearly shows that third filter 204 and fourth filter 205 respectively receive a real input and an imaginary input. Therefore, that the specification only discloses a real signal or an imaginary signal coming from the differential filter provides support for the claim language of claims 1 and 2. Somewhat similar comments apply to claim 10.

Furthermore, to explain the operation of the differential filters, Applicant now provides material from Korean Patent Application No. 1999-0042903.¹ Applicant believes that this material, which was originally incorporated by reference, adequately describes the operation of

¹ Applicant notes that due to an obvious typographical error, Korean Application No. 1999-0042903 was mistakenly identified as US Application No. 09/042,903. Applicant notes that this is an obvious error, because 1) KPA 1999-0042903 obviously describes the material of the present application, 2) the filing date of KPA 1999-0042903 is October 5, 1999, as specified in the specification as filed, and because the title of KPA 1999-0042903 matches the title originally present in the application as filed.

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the differential filters. This material consists of the same material incorporated by reference in the original application.

Claim Rejections Under 35 U.S.C. § 102

In rejecting claim 8 as being anticipated by Sunwoo et al, the Examiner provides analysis purporting to show that Sunwoo et al teaches each of the features recited in claim 8. Applicant respectfully submits that claim 8 is not anticipated by Sunwoo et al.

In more detail, claim 8 recites, *inter alia*:

A timing synchronization detecting unit for generating a timing synchronization discriminating signal corresponding to a power difference between preceding and succeeding samples of an input signal that are respectively ahead of and behind the input signal by a *semi-symbol period*, respectively.

The Examiner refers to Figure 4 of Sunwoo et al as teaching the claimed timing synchronization detecting unit. However, there is no teaching in Figure 4 or in its accompanying description or elsewhere in Sunwoo et al regarding a power difference between preceding and succeeding samples of an input signal that are respectively ahead of and behind the input signal by a *semi-symbol period*. Sunwoo et al discloses an early sampler 24 and late sampler 25, that does not disclose, or even suggest, anything relating to a semi-symbol period. For at least this reason, Applicant submits that Sunwoo et al does not anticipate claim 8.

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In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

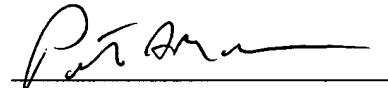
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